RM User

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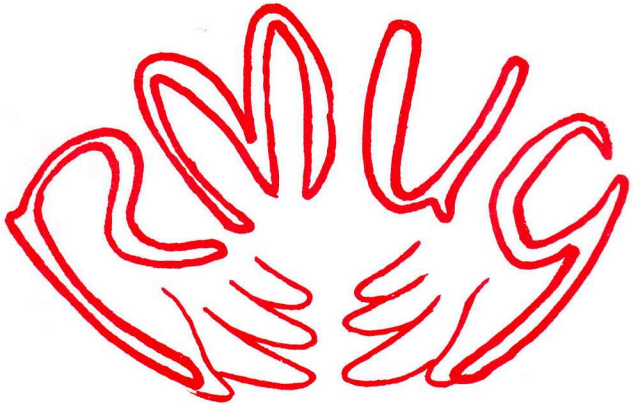
July 1995



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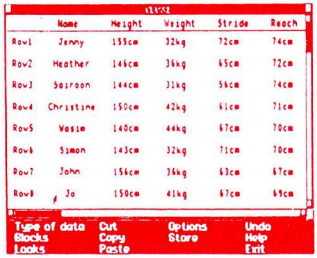

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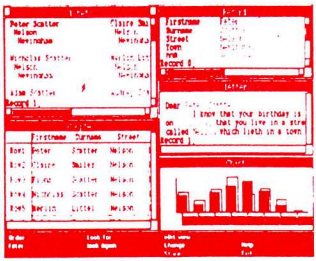

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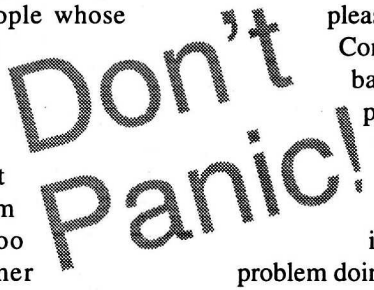
HelpLine

The User Group exists to help its members use the computers which they have.

The magazine is the main way in which we communicate with our members. If you find that it's not covering the areas you want to know about then phone someone listed at the back and let them know what you would like to see; the chances are that you won't be the only person who has the same needs.

Many of you (about 20%) are home users of Nimbus computers and we would like to help you. Do please phone any of the people whose numbers are listed at the back of the magazine and we will do our best to help.



You may find that you have a problem which you feel is too trivial for Customer Support or you may have a problem with which they can't help, perhaps because you have a non-standard setup for your equipment or you are using third-party equipment. This is the time when we may be able to help.

Remember that you can telephone the User Group members in the evening or at weekends when RM is shut (and, of course, you are just bound to hit problems). Also, RM don't claim to have great knowledge of products which they don't produce such as Excel or PageMaker. They can tell you how to install the packages on their equipment and how to get started but they cannot be expected to give you in-depth support on using the packages. We, on the other hand, can. Most of the people whose phone numbers are listed at the back are using a range of software which is probably the same as yours on a daily basis. We may have met exactly the problem you have just encountered.

If you are in difficulty, please ring anybody on the Committee (numbers at the back) and you may also phone Tim Phillips on 01284 706623 (home number).

It is a great help if you are having a problem doing something using your computer if you can be next to it when you phone because it may then be possible to talk you through a solution over the phone.

If your problem is not urgent, or you think it may be difficult to explain over the phone, then do please write to the Editor with your query. I will either reply to you directly or pass your query on to a better person to solve it or publish your letter in the next magazine as a request for help.

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Deadlines for the next issues

RM User 10:3 ..... 6 September 1995
RM User 10:4 ..... 23 October 1995

The date shown above is the ***latest*** date for copy for the magazine. You will normally receive the magazine about 2-3 weeks after the date shown.

Missing a Magazine?

Back issues of the magazine are available from the editor - please write for more details.

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News and Editorial

I am pleased to tell you that Peter Cochrane, Head of Research at BT, is going to join us at the Training Weekend. He has sent me an article which I have printed in this issue.

I am known to have a tendency to wallow in nostalgia. This may be due to having been lucky enough to have spent my first 18 summers on a farm without electricity. I don't know if it is the pull of this romantic image or my approaching senility (or the relentless effects of the National Curriculum) but everything seems to take longer to do. It shouldn't. I have more and more tools and newer and newer kit - but . . . I did read an interesting theory that the EEC was to blame because of a bit of legislation that widens the band of levels of voltage that may be offered to the consumer. Since money may be saved, one assumes that the power suppliers will offer lower voltages, a figure of 210 Volts was mentioned. I don't know if this is really going to slow us down - but I am looking for straws to grasp.

Another possible explanation is data overload. I don't know if there is a word for this yet - infogluttony maybe. I now have so much data at my fingertips that I sometimes feel overwhelmed by it. I certainly don't have enough time to enjoy it! I do love the Internet but I suspect I will never have enough time to use it as I would like. Unfortunately, it seems that the rest of the world loves the Internet too and the amount of time that is spent staring at the hourglass seems to increase steadily. The worst trip is when you navigate through a load of sites towards something you need and then, when you reach the site that has it, you get timed out.

I have been reading articles about research into using sensors to control computers via the output of the operator's brainwaves for over a year now. The latest is about identifying the shapes of the waves that show intellectual involvement (or lack thereof). One possibility is to use this facility to increase the speed of a game to an optimum level. I hope the ILS team will have a look at this concept.

I felt a spot of the old tecnolust stirring when I got a newsletter from Holdens, 01772 615512, describing some new software from Geoport which will allow your Mac AV to answer the phone, identify the type of call and, if it is a voice call, let you use the computer as a hands-free phone.

I would like to announce a competition to design a new logo for the magazine. Our present logo has been made redundant by the decision to change the name of the company from Research Machines to RM plc. I would like to have a softer design. Perhaps some budding artists out there will pick up their Fractal Design pallettes and send in something special but simple enough to reproduce easily. I can offer a copy of Microsoft's Cinemania CDROM as a prize.

I am fascinated by the stories that have been coming out of Japan for the last year about monitoring brain-waves with a view to using them to control a computer. The latest article was from the USA and mentioned the possibility of using this technology to adjust the level of difficulty of a game. Perhaps ILS will consider "taking this on board".

I received an interesting CDROM the other day from The Satellite Project, 01239 710662. It contains a load of space related images of the sort you can download if you have the time and patience. It has a reasonably efficient browser so if you are interested, give them a ring.

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Multimedia Roundup

by Mary Mabey

Although of most interest to secondary schools, especially KS3, there are many aspects of this disk which should be both accessible and useful in the Primary school.

The Physical World KS2/4

One of the increasing number of disks from the partnership between the book publisher Nelson and the television and computer company ILP. This was designed originally for the Acorn and is an entirely British, curriculum supportive resource. It is divided into 3 sections:

Natural Hazards

Features and Processes

People and their environment

Each of these leads to further sub menus. There is no over-all scrolling index, instead you are led from a list of main topics to several related topics. Although this works fairly well, at times I found it prescriptive, limiting, frustrating although sometimes it was also unexpectedly informative. Browsing in the index I found *plucking* sandwiched between *plate tectonics* and *point bar*. I was intrigued, what Geographical significance did this have? There was no sub topic but clicking on the slide associated with the *plucking* produced a picture of a glacier and the title "*Glacial plucking*" which in turn led to an animation of the formation of glaciers and glacial lakes. Returning to the menu I then explored *point bars* which led to the section on meanders with an animated sequence on how an ox-bow lake is formed.

The section **Features and Processes** offers 4 buttons for further exploration: *Biosphere, Atmosphere, Hydrosphere* and *Lithosphere* - hardly common terms for my KS3 students. However as they hover with mouse poised above any of these a definition appears at the foot of the screen. A click reveals a series of topics and sub-topics for further exploration. I finally found the water cycle here where it appears as the main topic of Hydrosphere under the term *hydrological cycle.* A crude animated diagram of the process is included.

As a librarian I tend to judge the success of any Geographical title by its coverage of earthquakes and volcanoes as I am continually besieged for this information! This disk rises nobly to the task. Information can be found straight from the index, or, if you know which area to select, via the **Natural Hazards** menu which offers a choice of Caribbean, American, African or Philippine plates. Selecting Philippines and choosing Mount Pinatubo offers the chance to view an informative news video showing the aftermath of the 1991 eruption. (nb. students need to have some prior knowledge to know that there will be volcanic activity in the Philippine plate) The video quality is sharp but viewed in a tiny window it is difficult to see some of the detail clearly.

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(Viewed in the enlarged version the results are very pixelated). From here you can click on ***related topics*** (a very useful tool), and find information on other volcanic activity including an excellent video of a live volcano erupting and pouring lava over the surrounding area. It is a shame that this excellent quality is not maintained in the accompanying volcano diagrams and animation which are extremely poor. The hazard of flood section includes video news footage of the Bangladesh floods of 1985 which clearly illustrates the effect of such a disaster on the survivors.

This is a tantalising disk. What is there is often excellent but it is not always easy to find and the index is far from comprehensive. Why include *typhoon* and *hurricane* but exclude *tornado* and *cyclone*? (nb *tornadoes* are mentioned in the text as I found accidentally while browsing through Features and Processes - Atmosphere- Weather- Tornadoes). It is good to see British examples of hurricanes (Gilbert in 1987) and the hydro-electric power station at Port Dinorwig in Wales but what a shame that the picture of the system has no explanatory labels. Surely this was the ideal opportunity for a clearly narrated animated drawing? The maps are merely superficial location maps with little indication of physical features.

The best part of this disk is undoubtedly the section called **People and their environment** which includes portraits of Amazonia, Bangladesh, California, Coastlines, Mississippi, Mountain landscapes, North West Africa, Snowdonia and Teeside. Those on Bangladesh and Mississippi are very good, clearly evoking the atmosphere of the places which they illustrate. The coastlines for comparison are Norway and Spain. The Spanish section contains statistical comparison of temperature and rainfall in Benindorm and London -a really good idea but, pure Geographers will no doubt wince when they note that both temperature and rainfall are shown using bar charts (not a line graph in sight) and the accompanying graph showing the daily ration of sunshine in Benindorm is contrasted with **Manchester**, not London!

When choosing a disk you should always look for the "value added" ingredient which makes it worth buying in preference to a straightforward, well illustrated book. The diagrams on this disk do not match the quality of those found in text books, a fault shared with the animations which are of poor graphic quality and lack both textural and audio explanation. The great bonus is the inclusion of video inserts, hot word definitions, glossary and the ability to leap effortlessly from one related topic to another. The disk comes with teaching notes, a scrapbook facility, opportunities to compare two ideas on screen simultaneously and Trail Save features. The narration and spelling are entirely British.

Requires 4MB RAM Cost approx £90 from ILP Tel. 0113 2461 528

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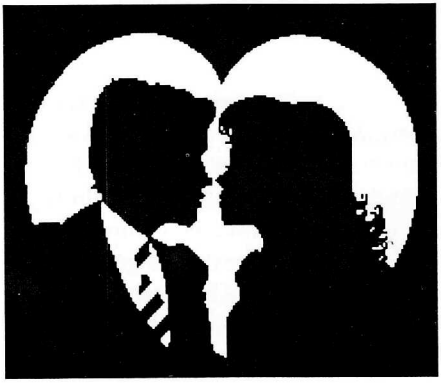
The Facts of Life KS3/4 -adult

This entirely British disk is the result of a project which included Projection Visual Communications, the National Society and the London Hospital Medical College. The authors have tried to make the disk work both as a resource for private research and as the focal point for class discussions on sexual matters. It comes with detailed teacher notes, ideas for use in PSE and an option which allows the teacher to decide which screens should be available for particular groups of students. The text was simplified and refined following field trials in an inner city school with the result that the package is easily accessible for a wide range of abilities.

The material is presented in a factual and unsensational manner. Drawings, not photographs, are frequently used where photographs might lead to embarrassment or voyeurism if viewed in a mixed class group. Photographs are used to great effect however in the section called **"Other People"** where multi- racial models of the appropriate age group pose as the young people in the case studies. These "teen problems" feature a wide range of teenage concerns varying from a 16 year old boy who thinks that he has made his girlfriend pregnant to a girl who is HIV positive. They are accompanied by an optional voice over and suggested topics for class discussion. (ideal for PSE.)

The **"Facts"** themselves are accessed from a series of sub menus. The language is direct and clear and a scrolling A-Z glossary provides definitions of the main terms. The average KS3/4 student should find no problems understanding the text which covers pregnancy, anatomy, contraception, puberty, health etc

Sexual relationships including abuse, culture, myths, sexuality and religion are covered in the third section **"Your Life,"** which also examines the teaching of the six main religions on marriage, family, contraception, sex, birth and abortion. (a useful reference for RE teachers.)



I was impressed by the content of this disk although the software suggests that it is not exactly "state of the art." (The sub-menu system is cumbersome and I found disk access time slow.) There are a few spelling inconsistencies between the menus and the text, however, these are minor irritations and should not detract from the effectiveness

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of this disk as a teaching resource.

An onboard scrapbook facility allows you to select screens and assemble them into a separate "book" of your own, adding appropriate notes/ extra text as required. A separate floppy disk, the **Teacher Custom set-up,** allows you to customise the disk to support your own teaching requirements. It lets you design your own worksheets and prevent access to parts of the CD-ROM which you consider inappropriate. (This is in addition to the pages of worksheets and teaching notes linked directly to screens on the disk which come in the accompanying folder.)

The disk can also be used as a reference tool in a school library, allowing worried teenagers to share their troubles, or satisfy their curiosity with an impersonal machine. (Many students would be too shy to voice a request for advice on this kind of topic.) The anonymity of the machine allows them to enquire in privacy, discovering appropriate advice and solutions to their problems without embarrassment. A list of telephone numbers and addresses for organisations such as Pregnancy Advisory services and Aids counsellors is included.

This is a most comprehensive, interactive, teaching tool which clearly reflects the aim of its authors to make a good teaching programme which is both curriculum relevant and user friendly. It supports PSE with cross curricular links to Science (reproduction), Food technology (diet/healthy eating), Religious Education (marriage/ abortion/contraception) and Drama (using material from the case studies).

Requires 386 or higher, 4 MB RAM recommended but will run in 2MB

Available from Projection Visual Communications Tel. 0171 250 1706 Price £89 plus VAT

Wanted:- a printer to go to Zimbabwe with a load of 480z's as part of an aid project. Please contact Helen King, 0181 673 3867

Wanted:- One 186 colour monitor in working order. Please contact David Palmer on 01977 615225.

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VIRTUAL EDUCATION & TRAINING

A Personal View by Professor Peter Cochrane
BT laboratories, Martlesham Heath. Ipswich

Experts

Only 100 years ago it was possible to be an expert educated and knowledgeable in at least one discipline. Exceptional people could achieve this status in two topics, with good working ability across others. A university education was something that was an acquisition for life with a steady topping up as the world of knowledge advanced. How different it is today! In any science and technology the only way we can be truly expert in anything is to be at the entry phase of something new and immature. We now have experts whose task is to marshal the abilities of ranks of even more diversified experts. The predicators of this change are technologies that emerge, evolve, and then quickly slide into obscurity.

Exponential Growth

It is now reckoned that mankind's information base more than doubles every 2 years, as does the power of computers and our ability to transport information through telecommunications. Whilst it has taken mother nature millions of years to evolve humankind to its present intellectual peak, it is likely that electronic computers will attain a similar standing in less than 100 years. It is estimated that the super computer equal to man in terms of raw processing and information storage power will be with us around 2015 - just 100 years on from the invention of the valve and 70 years on from the invention of the transistor.

Education

What has all this to do with universities and education? Can anyone remember logarithm tables and slide rules, plotting graphs by hand, having to pay for computer time, a world without computers and communication? Not if you are young you can't! We are fast approaching an epoch when no PC (Personal Computer) means no degree and no IT (Information Technology) skills means no job. When I went to school it was an oasis of information and learning. My home was like a desert with only a very few books. Today, for many children, the school is the desert and the home is the oasis! For at home they have powerful computers, CD libraries and network access to almost anything. Similarly we now find many of our best students selecting a university on the basis of the terminals - no 32 bit graphics - no chance!

Teaching Methods

With all this IT you might have expected that teaching methods would have changed radically - not so! In many respects we have seen a regression. Most of our red brick universities have lecture theatres with a fully equipped laboratory bench spanning the black/white board area. Just 50 years ago the common practice was to illustrate a lecture by practical demonstration. Today only a few can remember such radicalism - and yet it was the norm. How different today: the lecturer rushes in at the last minute, at best hands out printed notes and uses previously prepared and used overheads, talks for an hour and rushes out. After the event the students may seek out the lecturer, but will find a much reduced opportunity for air time. Staff student ratios have reduced, departments are below critical mass and the curriculum has expanded, whilst the student dwell time at university has remained static. Little wonder we complain of falling educational standards and a lack of student interest.

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Instant Gratification Society

It is important to recognise that the acceleration of society through technological change is creating a new paradigm that education has to respond to. Our children are growing up in a regime of increasing access to everything - almost an instant gratification society. Computers, communication and a manufacturing base that can produce almost anything customised to the user. Perhaps we should not then be surprised when many of our students complain of being bored, or that they find the delivery and development of intellectually exciting material so dull. They come from a different world!

No Jobs

The notion of a job for life now seems remarkable! Thirty years ago an average graduate engineer would have expected to work for three companies throughout a 40 year career. Today they can expect to work for 12, and by the turn of the millennium this will have risen to over 20. At the same time the average half life of their first degree studies will have fallen from 12 to 5 to 3 years over the same period. Companies will have moved on from a paternalistic sponsoring of first and higher degrees, to the hire and fire of expertise as required. It will then be the responsibility of the individual to keep topped up, keep pace with the technology, broaden their education, and remain a valuable and employable member of society. We will have entered a regime of continual, and customised, education on demand.

The Possible

Is all this pie in the sky, and can it, or should it, be done? Actually, it is with us now and in small pockets across the globe the process has started. Some medical schools in the USA issue students with lap top computers containing the first two years' notes. But these are not conventional notes, they are hypertext documents with animation and drill down detail way beyond the realms of conventional paper. Anatomical detail is delivered by 3D colour graphics produced by slicing frozen corpses. A frame - a slice, body fly through, interactive models and animation of chemical and physical functions are now available. The net result is a far faster assimilation of information and understanding. In Europe there are university degrees that you can start without a PC, but you will fail! In the case of my own daughters I have had to purchase individual machines - they cannot get access to sufficient computer time at university and will not succeed without their own computing power.

Company Training

In my own company we run internally customised Masters Programmes. These are affiliated to UCL and involve contributions from numerous UK and overseas academic and industry institutions. In fact one of the basic philosophies has been to shop around for the best of the best to educate the company based students. Until last year this was satisfied by flying in feature presenters and tutors. More recently we have experimented with teleporting in lecturers (on dial up Digital Circuits) who appear on a 3m back projected screen. It works - the best of the best at low cost!

The Virtual University

This year will see our move to virtualisation takes a further step, a complete MBA delivered on a PC teleworking unit with both way communication via screen mounted cameras and interactive software. Instead of taking a year out to study at a residential college, 20 students will complete their course at their place of work over two years. However, the style of teaching, presentation, and interaction will be entirely different. It will not be flat, planar and unmoving, but dynamic and interactive. The difference will be on a par with that between a paper book and a CD ROM!

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The ISDN - Capability Available Today

Last year we brought in Professor Bill Buxton of the University of Toronto to give a one hour lecture plus a half hour tutorial. This he delivered electronically on line in real time from his Toronto Office. The results were stunning. He had gathered examples on Human Interface work from all over the planet, animated it, interspersed with video, still pictures and virtually no text. This probably cost him 10 times the preparation investment than normal, but the outcome was breath taking, and a new teaching and learning paradigm. Having done this once, why should anyone else bother - here it was, the best available! But why not available to everyone? This is the next logical step!

Video & CD ROM

Present day video and TV based teaching and training packages suffer from three key limitations, they are not available on line and on demand, and are not interactive. Imagine having the ability to call up any course on demand, anytime, anywhere, and the improvement afforded by an interactive capability. Ask a question of the expert and they come right back with an explanation! Products of this kind are now starting to appear on CD ROM. You can now visit the Natural History Museum and ask the experts questions. So why not capture the questions of all the students for all time on topics like mathematics or the arts and commit them to electronic memory along with the responses?

Sub Critical Mass

One of the biggest limitations of UK universities is their small size. Many less than critical mass departments are struggling to cope with an increasing diversity of information and accelerating change. Overall the UK does have critical mass - but distributed across its institutions. Why are the same topics taught in a similar fashion across 30 departments at about the same time to groups of 40 to 80 students by lecturers who may not be the best. These self same lecturers are stressed by having to cover too much diverse material, deliver too many lectures and as a result spend too little time with individual students. How different it could be if a library of outstanding interactive multimedia teaching material was available on line backed up with access to enthusiastic academics!

Hands On

In many subjects, practical experience is essential to reinforce the theoretical and known. Providing sufficient laboratory or practical facilities has now become fundamentally impossible and a new raft of facilities is essential if students are to be well educated. Whilst we should not abandon the real laboratory, it is now possible to augment this with experiments on the screen. Much of our industry now employs simulation as part of an integrated CAD/CAM (Computer Aided Design and Manufacture) process. Why not extend this to teaching? Here we have computer minded students thirsty for hands on held back and frankly, not being educated in many of the relevant skills they need.

Visualisation

I well remember my introduction to field theory, thermodynamics, structures, machines and quantum mechanics by enthusiastic mathematicians and physicist. My understanding and rate of progress was almost solely dictated by their level of artistic attainment - which often left a lot to be desired. How different today when a simulation package gives a porthole of much greater precision to the truth. How unfortunate that no such teaching package is readily available and 30 years has only seen a migration from black to white board to overhead slides! Having systems laid out on a screen, and having knobs to twiddle and

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interactive pictures to see is far more edifying and satisfactory. It is a new and more communicative process that takes away much mystique embedded in complexity. Best of all, it can be on line with groups inter working on the same system or problem at the same time, but not in the same place!

Good Teaching

Throughout my life it has seemed that the best of teachers were able to put themselves in my place, assume my level of ignorance, and impart their understanding in a very graphic and enthusiastic way. Unfortunately, with the speed up of technological development, and subsequent broadening of the curriculum, the masters of this process are becoming all too rare. To some extent the hard sciences overcome this through mathematical and physical models that rapidly convey a mental image of a given process. However, in the soft sciences the process is far more difficult. For example: medical students are faced with a bewildering repertoire of problems, diagnostic and remedial techniques, and like other sectors medicine is under increasing pressure to become more efficient.

Telepresence for Real

A fundamental constraint to medical students gaining sufficient practical experience is the limited access to patients. Just how many people can physically crowd around one patient to witness and/or participate in an examination or operation? At best only a handful! The use of commercial TV cameras and screens provides a partial solution, but lacks depth of vision and reality. However, miniature cameras are now the size of a shirt button and can be mounted on a spectacle frame worn by a consultant as he operates. The visual scene can then be transmitted to a multiplicity of sites where students equipped with VR (Virtual Reality) displays can observe and learn. These displays position miniature TV screens over each eye so that the students experience the event in 3D colour, with binocular depth of vision. Microphones on the consultant's head mount also provide stereophonic sound for the observers. This increases the sense of realism and allows remote students to hear the commentary and interchanges with operating staff. Such a "surrogate head" might appear far fetched, but the technology is at an experimental stage, and operations on real humans were completed this year. Clearly the development of such techniques could see the introduction of broadcasts to a large number of medical personnel world wide. The surrogation roles could also be reversed. This would see the expert sitting behind the eyes of the trainee, guiding through commentary and sight. This would bring about a dramatic reduction in the time to disseminate information and experience, and could impact significantly on our established means of education and training.

The Future

As we move into the 21st century we can look forward to a world where the global sharing of information and ability will become the norm through telecommunications linking centres of need and expert-ise. Entirely new ways of educating and training people on a continual, on demand basis will evolve as our activities become virtualised. It is important to recognise that this may turn out to be the only way of balancing the conflicting demands of changing demand and expectation. We have the technology and the need - all we have to do is plot a course and change!

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Tales from the Thames

by Steve Rochford

Free Colour

About 6 months ago Hewlett Packard sent out a large number of invitations to try an HP DeskJet 1200 colour printer (at that time, the top of the range) free for a week. I returned the card and at the end of May my printer finally arrived. I installed it on the network, spent some time sorting out how to make the driver work (it seems to need some files present in the user's windows directory as well as on drive U for the Adobe level 2 PostScript driver to work properly) and got it usable within about 3 hours of its arrival. I then let the kids loose; HP was paying for everything except the paper so this seemed an excellent opportunity to find out how well it would work on the network and what it would cost to use it. I was using the PostScript version of the printer which works very well with graphics applications like CorelDraw! but programs like Paintbrush produce very large spool files and these can take a long time to print in PostScript mode; given more time I would have investigated installing a PCL driver as well or instead of the Adobe one. Print quality was excellent and the presence of a heater inside means that even heavily inked sheets come out dry so there is little risk of smearing. The printer mechanism is very fast - it takes less than a minute for a full colour image to emerge but the printer feels slow because it spends a long time building up the image internally before putting anything onto paper. This is partly caused by the kind of image many of the pupils were printing; they love doing radial fills in CorelDraw! and these take for ever to calculate. The other problem was LanSpool; my experience of this is that it delivers data to the printer just too slowly (a spool file of a megabyte can take several minutes to get into the printer before the printer can even start processing and some of the files being printed were several megabytes in size). I was supplied with an HP Jet Direct card already installed and a Lan Manager driver disc but, unfortunately, in the limited time available I was not able to get this to work. (It needs the standard Microsoft Remote Boot service installed on the server and this is not supported by RM) The cost was my biggest worry. The printer uses separate cartridges for cyan, yellow, magenta and black ink and during the week we emptied the black almost completely and about half emptied the others which gives a cost of about £40-£50 for ink. In that time we printed 393 pages giving a cost per page of about 10p. This is not outrageous but is too high to just let the pupils loose normally (in contrast, my Kyocera laser costs about £30 for 6,000 pages or 0.5p per page). I'm thinking about buying a colour printer for next year; I just have to work out the best way of controlling access to it.

To boldly go

The arguments about teaching grammar and spelling in schools continue without any real progress being made. I feel quite strongly that as an IT teacher I should point out mistakes to pupils and get them corrected. I know that there's always been an argument that if a pupil has spent a lot of time creating a piece of work it can be very soul destroying to have a teacher then scribble red ink corrections over that work. For hand-written work that may be true, but when the work is created on a computer it takes little time or effort to put right any mistakes and the final product shows no signs of correction. The corollary to this is also true, in my opinion;

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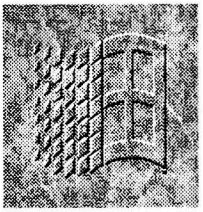
if a pupil hands in a piece of computer produced work which contains glaring mistakes then it suggests to me that they cannot be bothered to spend the time checking their work. One of the techniques I use to speed the processing of junk mail is to "mark" it as I read it; when I come to an obvious mistake I bin the letter. Even RM fell foul of this last week; their new catalogue was accompanied by a letter which used the word "of" instead of "have" - one of my pet hates - so in the bin it went!

Net Worth

The Internet and everything associated with it continues to grow at a mad rate. I still remain sceptical about its value in schools. I don't deny that there is a lot of useful information out there (although I've not yet seen anything which I can't do without) but there's also an unbelievable amount of dross. In schools which have limited resources available I wonder if it the money would not be better spent on buying a few more books, magazines or newspapers for the library.

95 now



Windows 95 is coming "real soon now" and many people are now involved in Microsoft's preview programme. A more cynical person than I am would describe this process as follows: you give Microsoft £30 and they give you a piece of software which is known to be buggy and ask you to find the faults. In fact, the version shipping is actually very good. It installed on my computer with very few problems (it's a standard RM D-Series machine with some "extras") and looked good. I wasn't sure that I would cope with it; over the years I've grown used to the Program Manager and File Manager way of working and wasn't sure that I'd want to re-learn how to use a computer. In practice, I found it quite easy to use once you learn to stop double clicking everything - programs now launch with a single click, for example, and get used to using the right mouse button to bring up property dialogues. I couldn't get it to connect to my Net LM server but I'm reasonably certain that this was because I use routing; the Smart Bridge software which RM now supply shouldn't cause any problems and they will be supporting Windows 95 on Net LM. I didn't have enough time to investigate all the settings but it looks as if it will be much easier to set up desktops on standalone machines which can't be either accidentally or maliciously altered by users. It will also be possible to load Windows off the local hard disc, log on to the network and collect your own desktop layout from there; a very nice touch. I don't think my school will be moving to Windows 95 in a hurry (it needs a minimum of a 386 with 4 Mb of RAM but most of my network stations are 286s) but in time I've no doubt that it will be as successful as Windows 3.x became. In the current issue of Educational Computing and Technology there is an article by Acorn explaining why they provide the best systems for school use. Apple and RM will be presenting their views in future issues but I want to get in first! Acorn make the point that the PC design is changing too fast for it to be suitable for schools who can't afford to replace machines every few years whereas the A3000 from 1989 is still very suitable for school's use. I don't use Acorn computers so I can't comment on how useful such a machine is but I do know that it has been superseded several times since then. What I can say is that although the 286 based machines which a school might have bought in 1989 are no longer state of the art they are certainly still capable

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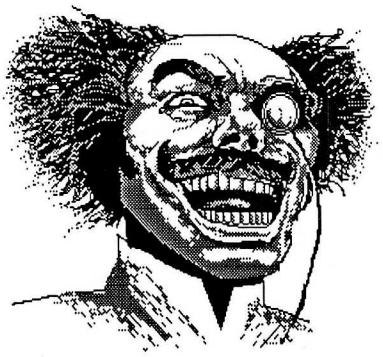
of running the educational software which they ran then and can be used with programs like Word 2 and Excel 4. I'm not saying that given the choice between a 286 and a 120MHz Pentium I'd pick the 286, just that I don't have to throw away the old machine just because a newer one has arrived. What we need to do in schools is to decide what pupils need to be able to do and then choose software which can do that. So far there is nothing which Word 6 can do which I feel my pupils need to do which can not be done with Word 2 so I feel no need to throw away a rather large investment! The article also makes the point that many schools are still using the BBC computers they bought 12 or more years ago. Well, I know at least one school using a 380z from much longer ago and several schools with 480z computers. There's certainly nothing wrong in using a BBC for simple control technology or a 480z for Smile maths but I think we do a grave disservice to pupils if we try and pretend that exposure to View or Write in any way will help to develop useful skills. Another point made by the article is that we shouldn't buy PCs for schools because most computers in the world are PCs; rather, we should choose the best tool for the job we wish to do. I can't disagree with that. I said earlier that I hate the use of "could of" instead of "could have" but it is used by a lot of people. I've no intention of accepting it as correct just because it's common currency. In computer choice, however, we have to ask why so many people choose PCs instead of Acorn. Of course marketing comes into it and takes over from technical considerations. I'm happy to accept that the ARM chip is a much better design than any Intel chip and that the graphics on Acorns years ago was better than many PCs today. I also think that many people choose PCs because they have the software that's needed to do the job. I know that there is some good software available for the Acorn but if a PC does the job that's needed, costs about the same as (or even less than) an Acorn then I think the factor of what computer is most used outside school starts to be important.



Safety First

I've recently had a chance to scan my network with Dr Solomon's. I told it to scan everything from the root of the server. It took 33 minutes to scan 36,617 files and said "no viruses" so I'm happy. If you have less trustworthy kids than mine seem to be (or are more worried about the security of your network) then you might be interested in a file manager program that Derek Henton (one of our members) has written. It makes it very simple to copy files from a floppy or from a public, pool type, area to a user's area. When copying from floppy it automatically runs Dr Solomon's to check the disc and won't copy files if it finds that the disc is infected. If you want more details then contact Derek at The Royal Wolver-hampton School, Penn Road, Wolverhampton WV3 0EG.

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FOCUS on SECURITY

NEW PRODUCTS FROM *RM DIRECT !*

'Blocker' and 'Blocker Plus'

Imagine turning your computer on and finding it didn't work because major components had been stolen, with no external visible sign of theft. This scenario can be avoided by securing access to the INSIDE of your PC with a 'Blocker', or buy the 'Blocker Plus' and lock the computer to your desk as well.

- two metal studs are secured to the back panel using existing screws
- strong metal bar threads laterally through the studs and is secured with a heavy duty padlock, preventing removal of the back panel and case
- pass monitor, keyboard, printer cables behind bar for extra protection
- 'Blocker Plus' is linked to a cable and pad which can then be screwed or glued to your desk for extra protection
- both systems very quickly and easily fitted

'Blocker'	£18.95	047-264
'Blocker Plus'	£25.00	047-668

'MINDER' security lock

An effective solution to computer theft, easily fitted to any metal-based PC. Approved by many major insurance companies.

- seven lever anti-pick safe lock will prove a major obstacle to the 'smash and grab' thief
- neat and unobtrusive but very securely fitted to your desk with strong plates, screws and adhesives
- key can only be removed when locked, you can never leave it accidentally unlocked
- glues or screws your computer to the desk with upto 1400kg of resistance to removal
- single keying available for multiple installations - IDEAL FOR NETWORKS

Security cable system	£25.00	045-019
NoteBook security kit	£25.00	037-117

Retainaguard property marking

A unique method of property marking, ideal for marking computers, printers, fax machines - in fact anything that could be of interest to a thief.

- each pack contains a template with a unique security code for the items to be coded (1 pack marks 3 items)
- simple application of the etching fluid permanently marks the equipment within 90 seconds!
- safe to use - fluids have COSH approval
- you tell the National Property Register what your codes are - once registered your property can always be traced back to you via the 24hr NPSR checkline

"In my experience, security systems like Retainaguard do deter thieves. I would strongly recommend Retainaguard to every individual and organisation as an important part of their overall security operation"

Sir Peter Imbert QPM, Retired Commissioner, Metropolitan Police

Retainaguard - single pack	£4.15	047-321
Retainaguard - 25 pack	£99.75	047-322

Security cable system - for desktop and portable PCs

A versatile system to help deter theft. Simple to install, remarkably effective and excellent value for money.

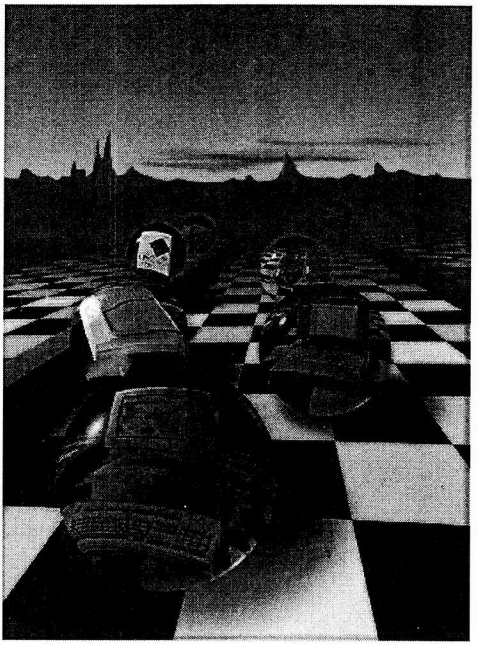
- desktop pack comprises padlock and 3 heavy duty pads - an anchor pad and two further pads, each with 2ft. nylon covered steel cable attached.
- very easy to fit, no special tools required
- single keying available for multiple installations, please call for details
- NoteBook version available, contains 1 pad, 5ft cable, padlock & carry case

'Minder' security lock	£54.45	042-414

DISCOUNT AVAILABLE ON VOLUME ORDERS

CALL *RM DIRECT !* ON 01235 826216

Topas 5.1 - DOS



An extremely powerful 2D and 3D modelling, rendering and animation package with a host of powerful features including 'match perspective' which fits your design into a photograph or animation of an existing location or site. *Topas* is a true 'spline modelling' program and scores consistently high in comparative reviews. In February, *Digital Video* magazine rated both *Topas* and *3D Studio* equal but remarked upon *Topas's* ease of use and suitability for fast production of animations. And just compare the price.
£399+VAT
NOTE: *Topas* includes all the features of *Flying Fonts* and *3D-Designer*

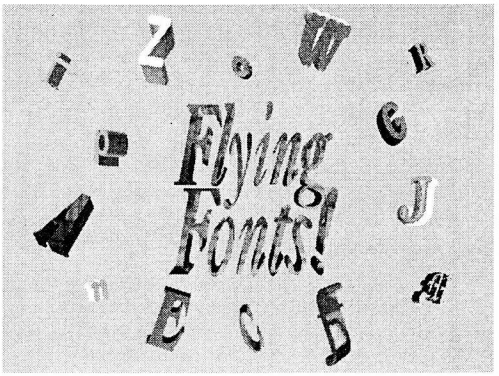
3D-Designer - DOS

An ideal program for Design Technology courses. 2D and 3D design, modelling and rendering software give professional results which is so easy-to-use that even a novice will be producing amazing, fully rendered 3D models in next to no time.
Imports EPS and 3D DXF files from professional art and CAD software making it ideal for visualising your designs. Exports BMP, EPS, GIF, TGA TIF and PCX so that you can use your models in your publications. Includes 'match perspective', 256 texture maps per object, transparency mapping, bump, luminance, sun-time with compass and colour controls.
£159+VAT

3DChoreographer - Windows

An amazingly easy-to-use 3D animation program that requires no design or modelling skill to produce impressive 3D FLC animations for multimedia presentations or just for fun. Ideal for introductory animation courses.
Includes a library of ready to use 3D 'actors' that can be animated using a simple time line process, giving fast results and requiring no previous skill. *3DChoreographer* is ideal for introducing 3D animation in education or training or for those who want to include animation in their presentations but do not want to go through the process of modelling.
Requires a 386 or 486 DX PC or with coprocessor and at least 4Mb RAM.
£79+VAT

Flying Fonts - DOS



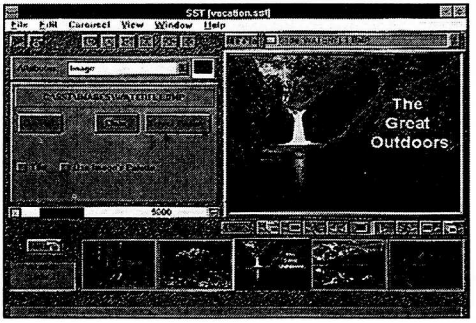
The ideal program for quickly creating animated 3D titles for computer based presentations or amatuer video. *Flying Fonts* allows you to create geometric shapes and models and to import backgrounds and textures. Features include texture maps on fonts, bevel, spotlights, highlights, Phong shading, metallics and transparency. Outputs high quality FLC animations or stills. Includes 12 scalable fonts. *Flying Fonts* can also use PostScript fonts.
£79+VAT

All the DOS based programs above require a coprocessor and minimum 8Mb RAM.

Flying Fonts Pro for Windows

This new professional, broadcast quality version of *Flying Fonts* includes many new features. Creates high quality FLC animations and stills in a variety of formats, .AVI (Video for Windows) animations and can output FRAME by FRAME to broadcast video quality for professional TV and video work. Accepts TrueType and PostScript fonts.
Requires Windows and 8Mb RAM.
£99+VAT

Super Show & Tell - Windows



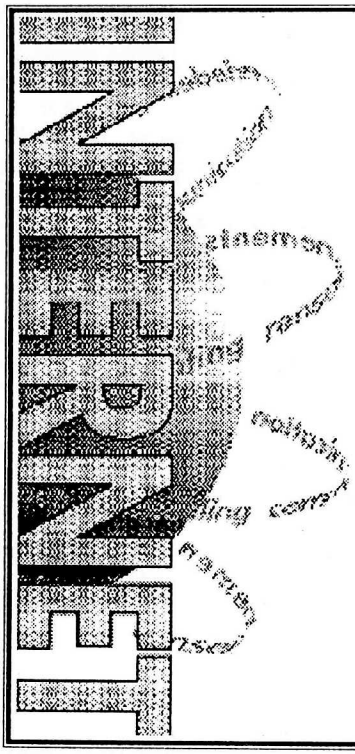
A multimedia authoring program that allows you to combine together text, sound, grapgics and animations to create presentations, demonstrations, teaching and training aids and other material. Simple to use yet very powerful. Supports most popular graphics formats, .WAV and MIDI sound files, AVI, FLC and FLI animation files.
£79+VAT

SST CLIP MEDIA CD

A 500Mb CD crammed with scenic photos, backgrounds, clip art, 3D menu buttons, 50 FLC animations, 21 AVI video clips, 10 AVI morphing transformations, sound effects and celebrity impressions and a full length music video for use with *Super Show & Tell.*
£29+VAT

Guide to Multimedia CD - Try *Super Show & Tell* and get some great media clips. **£9+VAT**

LTS, Haydon House, Alcester Road, Studley, Warks, B80 7AN
Tel 01386 792617 FAX 01386 793147



INTERNET FOR LEARNING

DEDICATED TO EDUCATION
AVAILABLE TO ALL SCHOOL, COLLEGE AND HOME USERS

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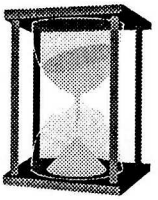
Want to improve the performance of your PC?

Windows '95 is on the horizon and todays 32 bit software are all making increasing demands on your system. With the Intel DX2 and DX4 Overdrive Processors you can upgrade your 486PC at a fraction of the replacement cost.



- Perfect for mathematical packages
- Ideal for handling graphics
- Integer & floating point units

50-80% Improvement in all applications!

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DX2-50MHz	£95
DX4-75MHz	£149
For 486 SX & DX 33MHz Systems	
DX2-66MHz	£145
DX4-100MHz	£199

UK School Resources Home Page

The problem we all have with the Internet is locating information within this vast library. Using the Net can be very much like looking for something in a library without an catalogue.

This problem is made all the worse for people (particularly students and teachers in schools) where the pressures of time and cost mean that hours of "wandering" are simply impractical. Large inlined graphics and many small indexes located all over the world (particularly in the US) slow things down even more.

UK Schools Resources was started with the aim to produce a free, voluntary run service where teachers and pupils could share information such as pointers to resources, contacts addresses to other teachers using the Internet in the UK, and ideas for lessons and activities using "Internet Skills" across the entire curriculum.

The service has only be running for about a month, but it has generated a lot of interest and the list of resources grows daily. If you get a chance perhaps you would like to take a look:

`http://www.liv.ac.uk/~evansjon/home.html`

When looking around you will find the section "UK Schools Internet Directory". At present there about 40 schools listed, but more are added every day. If you would like to place an entry in the directory then just follow the simple instructions given.

I hope you find the site useful and any comments (good or bad) would be greatly appreciated.

Many thanks,

Jonathan Evans

Department of Electrical Engineering and Electronics
The University of Liverpool
E-Mail: evansjon@liv.ac.uk
Fax: (+44)-(0)151-794-4540
PO Box 147 LIVERPOOL L69 3BX

"Are there still any BBC users out there? Hobbyists? Enthusiasts? I have LOADS of BBC (Master 128 & "B") software, ROMS, Z80 second processor & software, games, educational, admin. Most of it is FREE to a good home. Cheap, if not free Please contact me for a comprehensive list. No catches!

Roger Distill, Head of I.T., Bishopshalt School (Campus 2000:-YNC007)"

NASTY VIRUS ON THE LOOSE

A new virus called "Big Caibua" has been infiltrating IBM-compatible machines around the world, displaying marching phalluses and damaging files on infected computers. It's eluded most anti-viral software up till now, but last week anti-virus specialists released search-and-destroy tools targeted specifically at Big Caibua. Concerned computer users should contact the makers of their anti-viral software and obtain the latest version that combats this threat. (Chronicle of Higher Education 5/26/96 A20)

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Welcome to UK Schools

This list is for teachers and others interested in the use of the Internet in UK schools and for general discussion about anything concerning international classroom connections. This includes project and penpal requests, information about WWW, ftp and gopher sites and other mailing lists.

List Owners

Denis Russell
denis.russell@ncl.ac.uk
Doug Weller
Doug@ramtops.demon.co.uk

USEFUL COMMANDS

The following commands should be sent to mailbase@mailbase.ac.uk, NOT tothe list.

To leave the list:

```
leave uk-schools
```

To suspend mail temporarily:

```
suspend mail uk-schools
```

To resume mail:

```
resume mail uk-schools
```

To get the names of the List Owners, members and a brief description:

```
review uk-schools
```

For lists of files that the list-owners or others have made available for retrieval (faqs, etc.)

```
index uk-schools
```

To obtain the Mailbase User Card

```
send mailbase user-card
```

Potential contributors of files should contact the List Owner at:

```
uk-schools@request@mailbase.
ac.uk
```

To send a message to the list send it to:

```
uk-schools@mailbase.ac.uk
```

NOTE: If you have an automatic signature line, place the word STOP on its own as the last line in your request.

Please observe basic email-etiquette...

+Familiarise yourself with Mailbase commands:

*** DO NOT SEND COMMANDS to uk-schools - send them to MAILBASE ***

+ Obtain and read the Mailbase User Card

+Use an adequate descriptor in your subject line

+Use a maximum of 70 characters a line

+Send short messages which can be understood on their own

+Send personal replies to the individual concerned unless it will benefit everyone on the list

+ Remember this is a PUBLIC FORUM, but, most of all

This is Your list - Use it!

If you write a long article or report, send it to the listowners rather than to the list -- we will place it in the mailbase archive while you send a short summary of its contents to the list.

REPLIES

Replying automatically sends your message to the original sender.

If you want to reply to the list, you have to send it to

```
uk-schools@mailbase.ac.uk
```

BACK ARTICLES

'I'm new, I want to see what people have been saying.'

There's a wealth of useful information

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already accumulated on the mailing list. This is archived for a year at mailbase, which can be reached by gopher.

To look at back articles (very much recommended) you can gopher to
`gopher.mailbase.ac.uk`

You can use a web browser also.

The URL is gopher://nisp.ncl.ac.uk:70/11/lists-u-z/uk-schools

If you have no Gopher or WWW client, you can Telnet to lynx.mailbase.ac.uk

to access the Mailbase WWW server, loging on as lynx and then giving your terminal type, usually vt100.

Alternatively (and I think friendlier), you can telnet to bubl.bath.ac.uk, login as bubl, give your terminal type, and take the menus to Mailbase, then to UK-schools, then to archives.

For a tutorial on gopher access, send the following to:

```
mailbase@mailbase.ac.uk
send mailbase gopher-
 tutorial
```

If you have any problems or questions - please do not hesitate to contact:

Doug Weller
Home tel:+44 121 708 1254
Langley J&I School
email doug@ramtops.demon.co.uk
Solihull, UK, B92 7DJ

Thanks to the people at mailbase.ac.uk for making this facility available.

RM User Group Training Weekend 1995

Hot News! (I always wanted to say that) RM are going over to NT as the standard network system with a product called RM Connect. Sessions at this event will be devoted to explaining this move and how it will affect NetLM. Don't miss it!!

There will also be the following sessions:- Word (Int & Adv), Excel (App, & uses) Access, Control (Cheap & Regular!), Window Box, DTP (2, 1 on primary), Internet (inc. make your own page) CDROMs, AEGIS, Win 3.1 on Met 3.1, Surgeries, OS/2 and more. So make a note in your diary of the date and start putting requests in for money from your Inset budget.

Date: 20-22 October 1995
Venue: Novotel, Nottingham
Price: £250 member, £270 non-member

£75 for Saturday, £90 non-member
RM have offered to part-sponsor some primary delegates. Please contact Phil or Maureen

Nottingham is a busy city with lots to do both in the city and its environs for spouses/partners who are not interested in computers. Your partner can stay in your room (all rooms have double beds) for no extra charge although please not that the hotel will charge for any meals taken.

West Country Training Day

Please contact any member of the committee if you are interested in attending or hosting such an event.

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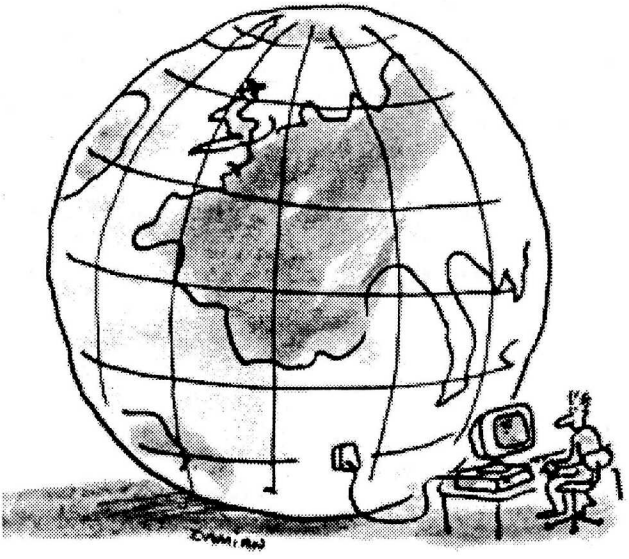
Downloads

Did you know? The Lord's Prayer has 56 words, the Ten Commandments 297, the American Declaration of Independence 300 . . . and the EEC Directive on the exporting of duck-eggs 29,911. From the Pax newsletter for those who suffer from anxiety attacks.

The Goddess also expects you to work on yourself. You must devote your full attention to every task you perform so you will realise - in a flash of sudden enlightenment - how confusing it is. You must master one Little Moron riddle after another until, with years of study, there is no longer any separation in your perception between subject and object, between you and the Little Moron.



Then there are bigots, who will persecute you because they hate Eris Discordia, and have no better sense than to judge an entire religion by the behavior of a single deity.

But before I was a Discordian, when I entered my room only to be reminded by its disarry that it was a mess, I felt a sense of defeat. These days when that happens I just say, "Hail Eris!" - our customary salute to any embodiment of chaos - and then I cheerfully carry on, secure in the knowledge that the constellations look no better.

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A Bill of Writes Date: 5.1.95

From: Nicholas Negroponte nicholas@media.mit.edu

To: Louis Rossetto lr@wired.com

Subject: A Bill of Writes

Dear Newt,

Your support of the digital age is deeply appreciated. As we move from a world of atoms to one of bits, we need leaders like you explaining that this revolution is a big one, maybe a 10.5 on the Richter scale of social change. Alvin and Heidi Toffler are dandy advisors; good for you for listening to them! The global information infrastructure needs a great deal of bipartisan cooperation, if only to help (read: force) other nations to deregulate and privatize their telecommunications. As you reach out across the world to evangelize the information age, people will listen.

However, there is something specific you could do for the digital revolution in your own congressional backyard, a few hundred feet from the Capitol building - perhaps something that has never been considered. Congress controls the world's largest library - it receives more than 30,000 items per day. Of these, perhaps 8,000 are saved. The Library of Congress is, quite frankly, out of shelf space - even if one includes the overflow cave it shares with Harvard University.

The library, your library, is a giant dumpster full of atoms. Books and other materials check in but almost never check out. But a wonderful largesse inspires this library: to read a book, one need not possess a special Library of Congress card, nor be a citizen of the United States. A person needs only to possess the desire to read. Well, actually, the individual has to be in Washington, DC, must be over 18 years old, and the librarians need to be able to find the thing requested. If mis-shelved, it might as well be lost forever.

Few people ever use the library because, in reality, almost no one can. The library is almost everything but usable, everything but digital. There are more than 100 million items, and virtually none are available in digital form. Recently, the library stuck its toe out onto the Internet, touching millions through exhibits on the World Wide Web. Indeed, last summer it received its first-ever digital books (never mind that no procedures exist for receiving those bits, and essentially no apparatus exists to deal with them).

As you know, almost every book published in the United States during the last 15 years has been produced digitally. Your next book will be, too, but I bet the atoms will still pile up in the depository - not the bits. This problem has not gone unnoticed. The National Science Foundation, the Advanced Research Projects Agency, and the Library of Congress are fully aware of the challenge to change those atoms into bits. The government has committed more than US$30 million over four years on digital-library research, including new means to convert, index, and navigate the wealth of bits in the global public library of tomorrow. Jefferson would be proud.

Copyright unbound

But Jefferson did not understand bits. He could not imagine that 1s and 0s would

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represent information and one day be read (and eventually understood) by machines. All of copyright law is essentially a Gutenberg artifact, bound to paper and construed in ignorance of the digital age.

It will take us years to build digital libraries and longer to retool copyright law. Intellectual property is an extraordinarily complex subject. We are almost clueless about how to handle digital derivative works and digital fair use. In a digital world, the bits are endlessly copyable, infinitely malleable, and they never go out of print. Millions of people can simultaneously read any digital document - and they can also steal it.

So, how do we protect digital information? Our own export laws (a separate issue you may want to consider) stymie encryption shamelessly. The information age is in a bit of a mess when it comes to understanding who may access what, when, how, and under the control of whom.

But don't wait. You control the library that manages United States copyrights. Establish a Bill of Writes immediately. Force us to find solutions, so our children and grandchildren can benefit sooner, rather than later, from being digital.

A digital deposit act

Here is the idea. Pass a Bill of Writes - a digital deposit act - requiring that each item submitted to the Library of Congress be accompanied by its digital source. Make it illegal to obtain copyright otherwise.

Publishers like Knopf and most authors will be concerned about the protection of their bits. The bill must include a bonded escrow agreement so these bits cannot be released without author and publisher approval. Eventually, the Library of Congress could provide bountiful nourishment for the global infrastructure.

Instead of being the "library of last resort," it might become the first place to look. In a richly woven infrastructure, the Library of Congress could be transformed from a depository into a "retrievatory." It would be closer to your desk and closer to the living-room couch than any of the thousands of public library buildings. A Library of Progress could be in the pockets of tomorrow's kids.

Having a Bill of Writes now means that we can spend the next 20 to 50 years hammering out new digital-property laws and international agreements without stunting our future. More importantly, it means that publishers and authors can elect to make their bits available after they decide they have earned enough, and the bits will be ready to go. Without a Bill of Writes, our grandchildren will spend a lot of time digitizing the 70 million items that will be saved by your library over the next 30 years.

The British and the French are building gigantic new buildings to hold more shelves for future atoms. Let our country be the first to write being digital into law.

Sincerely,

Your friends at the MIT Media Lab

This column was co-authored with Professor Michael Hawley mike@media.mit.edu, who holds appointments at MIT in Electrical Engineering and Computer Science, and Media Arts and Sciences.

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Some thoughts for debate

from www.ultralab.angla.ac.uk

Learning good lessons from good learning

We are probably in something like the 3rd millenium of good learning and hopefully something of that experience has been useful, although to judge by a lot of software based learning environments you wouldn't think so. In general we might suggest from the literature that good learning has Need, Intention and Participation whilst more controversially at ULTRALAB we would suggest it also has Delight.

Need and Intention are fairly straightforward but for Participation we need to look hard at our software design. Participative learning requires the learner to do far more than passively receive narrative; participation would normally include Selection or Creation, Collection, Annotation and Presentation. Designing software environments that allow all these is not trivial (see elsewhere on our pages reference to the software. Carnival des Animaux which makes a fair stab at this) and a key feature is Symmetry: learners must be able to use (in their Selection or Creation, Collection, Annotation and Presentation) tools of sufficient power that their own work stands in some sort of parity of esteem alongside the original software environment (in other words if their work looks too crummy they won't value it and the learners self esteem will take a dive). Delight need not simply be about 'having fun'. Often with conventional learning it is more to do with a subject taught with passion, with controversy, with eccentricity even. Too often computer based environments neglect these key elements that everyone remembers anecdotally as central to the delight in their 'best' learning experience (what was yours?). So, get out your computer based learning materials, test them out for participation and delight, be critical, ask for better. Our learners deserve it.

Intelligent Agents and the Information Explosion?

Of course it might be nice if we ever get intelligent agents. For trawling through tedious material and seeking something that matches your needs, as a background task (until the interface allows you to 'ask and get' 'here and now') they will be useful.

But, having too much information is not new (74,000 English language books published last year, how many did you see?) and often it is the selection by individuals, with all their quirks and eccentricities, that delights us most and works best. Imagine only selecting meals through an agent that knows what you like - dull. Same applies to books, films, anything. Some of the most enjoyable experiences with selection are those that surprise you (I hadn't expected to like it, it's not my kind of thing, but it was an absolute revelation!!). The book you read

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because you sat next to someone who said you'd enjoy it, the video you saw because someone else selected it for you, the Grouper you ate because you'd never tried it before and the waiter talked you into it, etc.

In the UK we have a very long running radio show "Desert Island Discs" which is hugely popular. The format imagines a celebrity cast away alone on a desert island with only their selection of 10 favourite records for solace. Why is it so popular? The records are rarely 'the best' but the personal recollections that serve as annotations to those records are fascinating. With vast bodies of information to explore, finding individuals offering their own selections and annotations can be very powerful as a way of making sense of the information. Here on the WWW some of the best places to visit are those where individuals offer their own selection of 'best places to visit'. We need people with choices and the opportunity to present those choices.

Evolution of educational computing:

In general the computer in the classroom around the world has passed (or is passing) through three stages:

The computer as topic "What did you do at school today Juliette?", "I used a computer".

The computer as surrogate teacher "What did you do at school today Juliette?", "I used a computer to learn about bearings".

The computer as tool: "What did you do at school today Juliette?", "We had this idea that there was some link between pulse rate and arm length and we tried to find out if it was true", "How did you do that?", "We put some data into a spreadsheet and...". <p>

In each of these three stages the computer has become better integrated into (and harnessed for) the normal school curriculum but we have not really reached the stage where computer software itself changes to offer those things that learning needs (like where is the support for drafting and formative assessment - we need to know what learners did, as well as knowing where they are now with their work). Nor have we really radically changed the curriculum to respond to the capabilities that computers offer (we have dropped little of the old mathematics curriculum for example, just added new bits).

Word Processing - 15 years and little progress?

There are some interesting issues that the example word processing throw up for educational computing in general: Typically we are in our second decade of word processing in the classroom but have few answers questions like the following:

We offer formative assessment to essay writers - when they have written with a pen our advice focuses on the next essay to be written, when they word process, because there is no electronic 'finished' the way there is with pen technology, as the formative advice is edited into the text then, IF our advice is good and IF students heed it in their

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redrafts, then every child will produce perfect work. But how many institutions differentiate between electronic and pen based copy in their marking strategies?

Electronic copy blurs the line between plagiarism and research. We are unlikely to be able to police the originality of individual endeavour in text rich work - it could have been cut, pasted, scanned, OCRed from anywhere, and anyone could have typed it. On the other hand we can make good judgements about the organisation, cohesion, communication, presentation and appropriateness of a piece of text. However, the response of most exam structures around the world at present to the plagiarism / research problem is to cut back on coursework assessment in favour of 'exam based' assessments where policing original endeavour is easier; the problem here is that this is to the considerable detriment of those very children who have enthusiastically adopted the tools we want them to be able to use in their future writing - not just word processors but the infrastructure of information support that they will find everywhere except in their exam. rooms. Where is entitlement in this?

As we have enthusiastically the big adopted generic software tools like word processors, databases and spreadsheets confident that their power is better than education's software 'cottage industry' cannot write better. However we have failed to address the issue of what extra functionality education needs - for example these generic software tools typically do not log process but only show current 'product' - we see where a child is now with their story but not the subsequent drafts that the story passed through on its way to the current version. In education we have always needed and valued drafts because of the need to offer formative assessment as well as summative. By failing to ask for additional functionality from our generic software tools we allow our curriculum and assessment to be skewed inappropriately by technology.

The extent to which we 'allow' students to harness software tools like spelling checkers and grammar checkers mirrors past failings with calculators where we did not recognise early enough how pervasive technology would become. With calculators we took them away from children and banned them initially from the classroom and for much longer from exam room. As a result a whole generation of children passed through schools with few (or inappropriate) strategies to help them work with the technology that was to become a normal part of their everyday lives. As technological evolution accelerates how can we more rapidly notice significant changes in technology and respond to them in our pedagogy and curriculum?

Technology encourages collaborative writers. The collaboration can be synchronous or asynchronous (they may be working from someone's previous draft, and may pass their own

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draft on for others to work with in the future). We do not have very good strategies for developing, supporting or unpacking collaborative writing but we clearly need to develop some. We might usefully look to Music or Drama for some strategies for this for example.

School Computers, Resources and the Home

Every school needs more, or newer, computers than it has. In many schools the ownership of home computers represents a very high percentage of pupil numbers. Every parent that ever bought a home computer mentioned somewhere during the purchase the words "education" or "learning". If only we could utilise this vast and wasted resource of home computers. So what are the problems?:

Equity - not all kids have computers at home (but in the 60's we told them to go to a friends to watch TV when it seemed helpful for their school work and more have computers at home now than had TVs in the 60's).

Standards - they all have different computers with different disc standards, different operating systems etc. No problem with this though, what we want them to be involved in is process not product "Go and try this on a database and bring me your conclusions" is very different from "Go and try this on a database and bring me your data".

Parents - we have offered little help to parents as supporters of their children's computer based learning (see also in our pages the Help for Parents section for some useful steps in the right direction). Without this help progress is difficult but parents are enthusiastic, have time and recognise the imperative of their children's development ("We must do it now, tomorrow they will be grown up and gone").

Finally if we survey the total learning time children spend in school between say 2 and 16 we find that something like 10% of it is spent in institutional learning, 90% learning in the family and the community. If we want to increase the quality or quantity of learning it is far easier to grab a little more of the 90% (say 5%) than to find half as much again of the 10%. (Just an aside on this, have you noticed how in the debate about class size in schools the 'curriculum manager' always suggests that 30 is too many and 15 about ideal because of the problem of managing learning for a large number but in the community, learning groups often collapse when they fall to as low as 15 because there aren't enough learners to sustain the group. Why is this? Maybe because in extra-institutional learning we are more willing to see the learners themselves as a resource to be tapped rather than seeing them as a series of vessels to be filled. Well, maybe anyway).

Some thoughts for debate: compiled by Sam Deane and Tom Smith.

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Shop Talk

by David Palmer

I had a real struggle with a simple job the other day. I thought I would do some name badges for a group that was going around Eden Camp. SEMERC, 0161 627 4469, had sent me a disc with some World War II clip art so I thought I would use a bit of that. I also wanted a border around the badge. I started in Works 3, went to Tools and mailing labels - but I couldn't get the graphic to come out consistently on each label. I then went to Word 2 but couldn't get the frame to work on the preset labels. When I tried to make my own template, I got a page of labels for each child when I went to merge! Eventually I got it down to three for each child on the merge and then painstakingly cut and pasted until it came out right. I couldn't figure out why the preset labels managed to change the name for each label but last night, in the wee small hours when many a solution pops out of the subconcious, I thought of putting a section break after the original label. I haven't tried it yet - has anyone else cracked it?

Do you get a SEMERC catalogue and dutifully pass it on to your SEN person? Perhaps it is worth having a closer look berfore you do. There are a growing number of programs - especially the 'My World' series - which are very useful for younger students. As mentioned above, the 'Just Pictures' series offers collections of pictures on a number of themes.

Another question for the massed data banks - how can I get PageMaker 5 to look in my data directory first when I go file open? I thought of launching it from a batch file but even if it works, it seems a bit crude. I have got used to Word with its INI file setting for where data lives. I do think it is a shame that Aldus didn't include the last few files as many other apps do now.

RM came through with the Idiot's Guide for the PCMCIA modem so it is now in use and is very nice too! All I have to do is wait for the service providers to speed up to 28800. The secret was to plug the card into slot B instead of Slot A. Obvious really! Has anyone tried setting up a station for remote access for admin?

Alice in Wonderland, Europress - 01625 859333, is proving to be very popular. You have the option of having an interactive read through the story with lovely witty animations. You can also play simple games which have links to the story - or you can put the disc in an audio player on track 2 and just sit back and listen to the story. It really is nicely done and at £20 is good value.

An area where time is going the wrong way is in the time it takes Windows to get to work. I have tried all sorts of settings for virtual memory but in spite of finally getting set up with 8M of RAM, I can't seem to get it right. I think my next experiment will be to turn the cache off! If anyone has done any experimenting in this area I would love to hear the results. I am also beset by bits off weirdness like right here in Pagemaker 5. When I move the cursor to the end of a sentence to edit

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it, the full stop jumps up to superscript! If I press PgDn, the cursor jumps UP to the top of the screen. Of course, it may just be the last fragments of my sanity sliding away.

Good value too from Oakley, 01270 759739, who have a series of very small apps that are very functional. One replaces your wall paper with a calendar. You can click on any date and add a diary entry. They also produce the program Smart Cat which will automate disc-cataloguing. They will send you a disc containing their shareware programs.

More Viruses

You may remember that I mentioned an odd and very occasional fault where my standalone machines would freeze with the message PARITY CHECK on the screen. One of my students said it was a virus but I was not convinced because it happened so rarely and restarting the machine seemed to cure it. I did download McAffee's Scan program and ran it on each machine which gave an all-clear message. This, and a suggestion that it was simply a loose memory board, made me feel quite confident until I got a new laptop - which came up with the same message in less than a week. It had DOS 6.2 which includes Microsoft's Anti-virus program so I ran that and it gave me an all-clear too. I have been very happy with a disc-cleaning program called Headmax which also checks disc head alignment. I saw a new product called Disc-clean that offered the same facilities plus an anti-virus check-up. When it came it immediately detected a virus. However, I didn't realise that it has a safety device that means that it won't run again once it has smelt a rat! Co-incidentally a friend came to visit. He has written a huge amount of code in the form of Excel macros which result in simple and intelligible menus - what a shame he never worked for Microsoft! He had Dr Solomon's installed on his machine and a quick check on a floppy from my troubled machines gave the message that it had the Parity virus which 'occasionally(3%) gives spurious hardware fault messages'. I bought Dr Solomon's and it says it has fixed the problem. My maths is too rusty to say how long I will have to wait to be sure that a (3%) chance has not occurred but I must echo John Williams comment that "If you don't check - why don't you?"

PKZIP Trojan

A Trojaned version of the popular, DOS file compression utility PKZIP is circulating on the networks and on dial-up BBS systems. The Trojaned files are PKZ300B.EXE and PKZ300B.ZIP. CIAC verified the following warning from PKWARE: —Some joker out there is distributing a file called PKZ300B.EXE and PKZ300B.ZIP. This is NOT a version of PKZIP and will try to erase your harddrive if you use it. The most recent version is 2.04G. Please tell all your friends and favorite BBS stops about this hack. Thank You. Patrick Weeks Product Support PKWARE, Inc. PKZ300B.EXE appears to be a self extracting archive, but actually attempts to format your hard drive. PKZ300B.ZIP is an archive, but the extracted executable also attempts to format your hard drive.

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Your Magazine

I make no apologies for leaving this page as it is since I agree with every word!

I really do welcome items for the magazine from anyone. You don't have to be a great writer to send something in; send a letter or a short tip for the Hints and Tips pages, everything is welcome. If you want to phone and talk something over then please do; even if you aren't sure how to write something down then I can always include your ideas in Hints and Tips or as a plea for help; some of you will recognise your phone calls on the Hints and Tips pages!

I would be particularly pleased to hear from the people who are using RM computers at home; there are quite a lot of you out there. Some of you will be experienced at working with computers and I would be interested to know why you chose RM for home use. Others will have responded to RM's advertising, perhaps because your children use the same computers at school. How are you getting on with your new machine? Did you have any problems getting started? It doesn't matter if you still don't know the answer to the problem- this is how you'll find out - and it doesn't matter if you think that your problem was trivial; remember that there are many other people who are going to be in exactly the same position as you and will welcome the help that you can give.

If you are writing for me then the ideal is to send me a disc produced using Word or Word for Windows but I can cope with any word processor that runs on a PC or Nimbus (I think). If what you are sending is short then a letter on good old fashioned paper is fine. I can also accept articles left on the bulletin board - the easiest way to to do this is to prepare your article in a word processor and save it normally. You then send a short e-mail to me and attach your file to it when you are on-line. It's actually easier to do than to describe because the whole thing is menu driven.

Finally, we pay for published articles at the rate of £5 per printed page (although all payments are at the Editor's discretion).

Advertising in the Magazine

Full and half page advertisements can be placed in the magazine and details can be obtained from the Advertising Manager. We also take classified ads and members may place free ads for surplus equipment in MicroMart.

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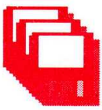

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